Manitoba Agriculture

Information Update

Guidelines For Estimating COW-CALF PRODUCTION COSTS Based On A 70 Cow Herd

DATE: October, 1991

This guide is designed to provide you with planning information and a format for calculating costs of production on a 70 cow-calf enterprise. The production costs included in this enterprise budget are not intended as a cost study of the beef industry in Manitoba.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time; or comparing the plan with the actual production at the end of the planning period. **Fixed costs are based on new costs.**

The budget may be adjusted by putting your figures in the appropriate column. Each cow-calf producer is encouraged to determine his own costs of production based on his own inputs, pasture program, and management.

MG-15396

COW-CALF PRODUCTION COSTS 1991
(BASED ON A 70 COW HERD)

		$/Cow/Year	Your Farm
A.	**OPERATING COSTS**		
1.	**Feed Costs**		
	1.01 Grain	$ 5.22	
	1.02 Hay	90.00	
	1.03 Salt & Minerals	15.52	
	Total Feed Costs	**$ 110.74**	
2.	**Other Operating Costs**		
	2.01 Straw	$ 15.00	
	2.02 Vet. Medicine & Supplies	24.30	
	2.03 Breeding Costs	14.96	
	2.04 Fuel, Mtce. & Repairs	25.00	
	2.05 Utilities	10.00	
	2.06 Marketing & Transportation	3.43	
	2.07 Death Loss	10.00	
	2.08 Manure Removal	10.71	
	2.09 Insurance	2.23	
	2.10 Herd Replacement	37.50	
	2.11 Miscellaneous	7.14	
	2.12 Stabilization Premium	9.00	
	Subtotal Operating Costs	280.01	
	2.13 Operating Interest	15.40	
TOTAL OPERATING COSTS		**$295.41**	
B.	**FIXED COSTS**		
3.	Depreciation		
	3.01 Buildings	$ 15.00	
	3.02 Machinery & Equipment	27.14	
4.	Investment		
	4.01 Buildings	$ 12.00	
	4.02 Machinery & Equipment	17.25	
	4.03 Livestock	80.00	
	4.04 Pasture (Avg. of A & B)	77.62	
TOTAL FIXED COSTS		**$229.01**	
TOTAL OPERATING AND FIXED COSTS		**$524.42**	
5.	Labour	86.40	
TOTAL COST OF PRODUCTION		**$610.82**	

Breakeven price $/cwt.

Operating Costs	$ 57.00
Total (without labour)	101.00
Total	118.00

Breakeven Price/kg = Cost ÷ 90% calf crop ÷ 575 lb calf weight

ASSUMPTIONS

1. This budget outlines the cost of production for a cow-calf operation with 70 cows, 2 bulls and 90% calf crop weaned.

2. Building and Equipment are valued at new cost.

3. All feed is valued at Fair Market Value.

4. Manure removal contracted out.

5. Replacement heifers are valued at fair market value.

6. This budget assumes an average weaning weight of 575 lbs. (steer calves 600 lbs. and heifer calves 550 lbs.)

COW-CALF PRODUCTION COSTS - 1991
WORKSHEET

A. OPERATING COSTS — Your Farm

1. Feed Costs

1.01 Grain (includes processing)

	60	days/year	_____
x	1.36	kg barley/cow/day (3.0 lbs)	_____
x	$ .064	/kg barley* (2.9¢/lb or $1.40/bu)	_____
=	**$ 5.22**	**/cow**	_____

1.02 Hay

	3.0	tonnes alfalfa brome hay/cow	_____
x	$ 30.00	/tonne ($27/ton)	_____
=	**$ 90.00**	**/cow**	_____

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* 1 bushel (bu) barley = 48 lbs = 21.8 kg
1 kilogram (kg) = 2.2046 pounds (lbs)
1 tonne (t) = 1,000 kg

1.03 Salt and Minerals — **Your Farm**

a) Salt

	16.0	kg salt/cow/year		_____
x	$ 0.25	/kg		_____
=	$ 4.00	/cow	a)	_____

b) Minerals

	16.0	kg mineral/cow/year		_____
x	$ 0.72	/kg		_____
=	$ 11.52	/cow	b)	_____
=	**$ 15.52**	**/cow**	**(a + b)**	_____

2. Other Operating Costs:

2.01 Straw

	1.0	tonne straw/cow/year		_____
x	$ 15.00	/tonne		_____
=	**$ 15.00**	**/cow**		_____

2.02 Veterinary Medicine & Supplies

a) Calf Medication

	$ 0.59	/calf Blackleg (8 way vaccine)		_____
x	90	% calf crop		_____
=	$ 0.53	/cow	a)	_____

b) Cow Medication

	$ 2.34	/cow (IBR, BVD, PI3 + BRSV)		_____
	3.20	/cow (scour vaccine admin. twice)		_____
	9.50	/cow (Ivomec - pour on)		_____
	0.53	/cow (ADE, 2 treatments)		_____
=	$ 15.57	/cow	b)	_____

c) Herd Health Program * **Your Farm**

Professional Services:
$ 70.00/hr for 4 visits/year
(assume 1 visit @ 2 hours, include preg check and 3 visits @ 1 hour = 5 hours total)

	$ 70.00	/hour	NOTE: Preg checking could
x	5	hours	cost up to - $3.25/cow, rather than an hourly
÷	70	cows	rate.
=	$ 5.00	/cow	c) _____

d) Mileage *

Assume that herd health charges include mileage;
$0.70/km for an 80 km round trip.

	$ 0.70	/km	_____
x	80	km	_____
x	4	visits	_____
÷	70	cows	_____
=	$ 3.20	/cow	d) _____
	$ 24.30	**/cow**	**(a to d)** _____

2.03 Breeding Costs

ALTERNATIVE - USING A BULL

a) Feed For Bulls

	3	tonnes alfalfa brome hay	_____
x	$ 30.00	/tonne	_____
x	2	bulls	_____
÷	70	cows	_____
=	$ 2.57	/cow	_____
	3.6	/kg grain/day	_____
x	120	days	_____
x	$ 0.064	/kg	_____
x	2	bulls	_____
÷	70	cows	_____
	$ 0.79	/cow	_____
=	$ 3.36	/cow	a) _____

1 kilometre (km) = 0.62 miles

* These are maximum rates charged.

b) Straw for Bulls — Your Farm

	0.5	tonnes/bull	
x	$ 15.00	/tonne	
x	2	bulls	
÷	70	cows	
=	$ 0.21	/cow	b)

c) Vet & Medicine for Bulls *

	$ 17.50	/bull (Complete exam)	
+	53.00	(Semen test)	
x	2	bulls	
÷	70	cows	
=	$ 2.01	/cow	c)

d) Replacement of Bulls

	$ 2,000	/bull; original cost	
-	1,400	/bull; salvage value	
÷	4	years of service	
x	2	bulls	
÷	70	cows	
=	$ 4.29	/cow	d)

e) Investment in Bulls

$$\frac{\text{Original Cost} + \text{Salvage Value}}{2} \times \text{Interest Rate}$$

	$ 2,000	/bull, original cost	
+	1,400	/bull; salvage value	
÷	2		
x	8	% interest on investment	
x	2	bulls	
÷	70	cows	
=	$ 3.89	/cow	e)

* These are maximum rates charged.

f) Buildings & Pasture Costs for Bulls **Your Farm**

Assume the same pasture cost that P.F.R.A. charges for 1 cow without a calf

	$ 42	Pasture Cost	
x	2	bulls	
÷	70	cows	
=	$ 1.20	/cow	
	$ 14.96	**/cow**	**(a to f)**

OTHER BREEDING ALTERNATIVES

a) Artificial Insemination - may be another option; $10 to $20 per cow or heifer

b) P.F.R.A. Community Pasture - breeding fees of $29 per cow or heifer

2.04 Fuel, Maintenance & Repairs

a) Machinery

	$500.00	fuel cost	
+	500.00	maintenance & repairs	
÷	70	cows	
=	$ 14.29	/cow	a)

b) Buildings, Yard Fences and Waters

	$750.00		
÷	70.00		
=	$ 10.71		b)
=	**$ 25.00**	**/cow**	**(a + b)**

2.05 Utilities

	$700.00	total cost	
÷	70	cows	
=	**$ 10.00**	**/cow**	

2.06 Marketing & Transportation — Your Farm

a) Trucking (15% culled)

	10	cull cows	
x	1,200	lbs/cow	
x	$ 1.25	/cwt (trucking cost)	
÷	70	cows	
=	$ 2.14	/cow	a)

b) Selling Commission

	10	cull cows	
x	1,200	lbs/cow	
x	$ 50.00	/cwt, selling value	
x	1.5	% commission on sales	
÷	70	cows	
=	$ 1.29	/cow	b)
=	**$ 3.43**	**/cow**	**(a + b)**

2.07 Death Loss

	70	cows	
x	1	% death loss	
x	$ 1,000	/cow	
÷	70	cows	
=	**$ 10.00**	**/cow**	

2.08 Manure Removal

Budget assumed a custom charge of $1,500, once every 2 years. It was estimated that it would take two men with a crawler and one truck two days to clean the lots and pole barns. (*No Value on manure.*)

	$ 1,500	annual cost for removal	
÷	2		
÷	70	cows	
=	**$ 10.71**	**/cow**	

2.09 Insurance Cost

	$21,000	building investment	
x	0.60	cost/$100 capital	
+	$ 30.00	liability insurance	
÷	70.00	cows	
=	**$ 2.23**	**/cow**	

2.10 Herd Replacement (15% culled) — Your Farm

	$ 900.00	/replacement bred heifer	_____
-	650.00	/cull cow	_____
x	15	% replacement rate	_____
=	**$ 37.50**	**/cow**	_____

2.11 Miscellaneous
(Includes expenses relating to farm records, administration, office supplies & telephone.)

	$ 500.00	total cost	_____
÷	70	cows	_____
=	**$ 7.14**	**/cow**	_____

2.12 Cow Calf Stabilization Premium

	$ 9.00	**/cow**	_____

2.13 Operating Interest
(Operating interest is charged on one half of the subtotal operating costs.)

	$ 280.01	Subtotal operating costs	_____
÷	2		
x	11	% operating interest rate	_____
=	**$ 15.40**	**/cow**	_____

B. FIXED COSTS Your Farm

3. Depreciation:

Original Cost - Salvage Value
Useful Life

3.01 Buildings

	$ 3,000	Bull Yard & Calving Pens	_____
	13,500	Main Wintering Lot & Pole Barn	_____
	1,500	Well	_____
	3,000	Handling Facilities	_____
=	$21,000	Original Value	_____
-	0	Salvage Value	_____
÷	20	years useful life	_____
÷	70	cows	_____
=	**$15**	**/cow**	_____

3.02 Machinery & Equipment

a) Water System and Feed Bunks

	$ 3,000	Original Value	_____
-	0	Salvage Value	_____
÷	10	years useful life	_____
÷	70	cows	_____
=	$ 4.29	/cow	a) _____

b) Tractor and Loader

	$40,000	original cost	_____
-	10,000	salvage value	_____
÷	10	years useful life	_____
÷	70	cows	_____
x	40	% usage in cow-calf enterprise	_____
=	$ 17.14	/cow	b) _____

c) Miscellaneous Machinery — Your Farm

(Post auger and driver, wagon and other miscellaneous tools along with a portion of half-ton truck.)

	$ 6,000	original cost	_____
-	1,200	salvage value	_____
÷	12	years useful life	_____
÷	70	cows	_____
=	$ 5.71	/cow	c) _____
=	**$ 27.14**	**/cow**	**(a+b+c)** _____

4. Investment

$$\frac{\text{Original Cost + Salvage Value}}{2} \times \text{Interest Rate}$$

4.01 Buildings

	$ 3,000	Bull Yard & Calving Pens	_____
	13,500	Main Wintering Lot & Pole Barn	_____
	1,500	Well	_____
	3,000	Handling Facilities	_____
=	$21,000	Original Value	_____
+	0	Salvage Value	_____
÷	2		_____
x	8	% investment interest rate	_____
÷	70	cows	_____
=	**$ 12.00**	**/cow**	_____

4.02 Machinery & Equipment

a) Water System and Feed Bunks

	$ 3,000	Original Value	_____
+	0	Salvage Value	_____
÷	2		_____
x	8	% investment interest rate	_____
÷	70	cows	_____
=	$ 1.71	/cow	a) _____

b) Tractor and Loader

			Your Farm
	$40,000	original cost	_____
+	10,000	salvage value	_____
÷	2		_____
x	8	% interest	_____
÷	70	cows	_____
x	40	% usage in cow-calf enterprise	_____
=	$ 11.43	/cow	b) _____

c) Miscellaneous Machinery

	$ 6,000	original cost	_____
+	1,200	salvage value	_____
÷	2		_____
x	8	% interest	_____
÷	70	cows	_____
=	$ 4.11	/cow	c) _____
=	**$ 17.25**	**/cow**	**(a+b+c)** _____

4.03 Livestock

	$ 1,000	/cow	_____
x	8	% investment rate	_____
=	**$ 80**	**/cow**	_____

4.04 Pasture Costs Your Farm

Budget examined four different pasture programs with varying land values and carrying capacities. Choose the one that applies to your farm. Cattle were pastured for 140 days.

A. MARGINAL LAND: Land values at $247/hectare ($100/acre) with carrying capacity of 3.2 hectares (7.9 acres) per cow. Property taxes are $1/hectare ($0.40/acre).

a) Land Investment Cost:

	3.2	hectares/cow	
x	$247.00	/hectare	
x	8	% investment rate	
=	$ 63.23	/cow	a)

b) Taxes

	$ 1.00	/hectare	
x	3.2	hectares/cow	
=	$ 3.20	/cow	b)
	$ 66.43	**/cow**	**(a + b)**

B. CROP LAND: Land valued at $800 per hectare ($325/acre) with a carrying capacity of 1.2 hectares (3 acres) per cow. Property taxes are $10/hectare ($4.05/acre).

a) Land Investment Cost:

	1.2	hectares/cow	
x	$800.00	/hectare	
x	8	% investment rate	
=	$ 76.80	/cow	a)

b) Taxes

	$ 10.00	/hectare	
x	1.2	hectares/cow	
=	$ 12.00	/cow	b)
	$ 88.80	**/cow**	**(a + b)**

Your Farm

C. **CROWN LAND:** Crown land pasture cost is based on crown rental rate of $180/quarter which includes property tax. Carrying capacity is estimated at 10 cows per quarter. Fence cost at $8,400.00

a) Depreciation on fence

	$ 8400	fence cost	
-	1400	salvage value	
÷	20	useful life	
÷	70	cows	
=	$ 5.00	/cow	a)

b) Fence Investment Cost:

	$ 8400	fence cost	
+	1400	salvage value	
÷	2		
x	8	% investment rate	
÷	70	cows	
=	$ 5.60	/cow	b)

c) Land Rental (includes taxes)

	70	cows	
÷	10	cows/quarter	
=	7	quarters	
x	$ 180	/quarter, rental rate	
=	$1,260		
÷	70	cows	
=	$18.00	/cow/year	c)
=	**$28.60**	**/cow**	**(a + b + c)**

1 quarter section = 65 hectares = 160 acres

D. **P.F.R.A.:** Community pasture grazing fee is estimated at $0.29/cow/day plus $10/calf/season. Season is 140 days.

Your Farm

a) Cows

	$ 0.29	/cow/day		
x	140	days		
=	$ 40.60	/cow	a)	

b) Calves

	70	cows		
x	90	% calf crop		
=	63	calves		
x	$ 10	/calf/season		
÷	70	cows		
=	$ 9.00	/cow/year	b)	
	$ 49.60	**/cow**	**(a + b)**	

5. **Labour** (includes winter feeding period, inspecting, calving and maintenance and repair labour to fences and buildings)

	9	hours/cow/year		
x	$ 9.60	/hour		
=	**$ 86.40**	**/cow**		

FOR MORE INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE

Budget Prepared By The Following Farm Management Specialists:

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